

REMARKS

This Preliminary Amendment is filed in response to the Final Office Action mailed on September 27, 2007, and with the Request for Continued Examination and the appropriate fees filed herewith. All objections and rejections are respectfully traversed.

Claims 1-6, 12-14, and 26-29 are in the case.

Claims 28-29 were added.

Request for Interview

The Applicant respectfully requests a telephonic interview with the Examiner after the Examiner has had an opportunity to consider this Amendment, but before the issuance of the next Office Action. The Applicant may be reached at 617-951-2500.

Rejections Under 35 U.S.C. § 102

At paragraph 3 of the Office Action, claims 1, 2, 4, 5, and 12 were rejected under 35 U.S.C. §102(b) as being unpatentable in view of Pratt, U.S. Patent No. 6,127,058 issued on October 3, 2000 (hereinafter “Pratt”).

Applicant’s claimed novel invention, as set forth in representative claim 1, comprises in part:

1. A conformable fuel cell, comprising:

(A) a membrane electrolyte intimately interfacing with a catalyst layer along each of the membrane’s major surfaces being a catalyzed membrane electrolyte, having an anode aspect and a cathode aspect, and which catalyzed membrane electrolyte is *conformable to the contours of any desired shape*;

(B) diffusion layers sandwiching said catalyzed membrane electrolyte, said diffusion layers being comprised of materials that are conformable;

(C) flexible current collectors coupled with each of said anode aspect and said cathode aspect of said membrane electrolyte;

(D) *a conformable fuel delivery means coupled with said anode aspect of said membrane electrolyte that delivers fuel substantially uniformly to said anode aspect while said fuel cell maintains said desired shape, said fuel delivery means maintaining high compression along the active surfaces of the fuel cell; and*

(E) *electrical coupling disposed across said anode aspect and said cathode aspect and having means for connection to an application device being powered by said fuel cell.*

In Fig. 4, Pratt teaches an MEA that is disposed between two current collector assemblies. Specifically, the current collectors are fabricated in a very thin and flexible format by replacing a plastic frame with a plastic film that has **metal current collectors** (i.e., flexible circuits). Furthermore, the plastic film contains holes to provide passage of the fuel and oxidant to the electrode. The current collectors are **etched** in the metal foil just like circuitry is etched to make printed circuits thereby making it one permanent component. An electrical interconnection is then made by connecting the outlying interconnect means to each other without transversing the MEA. Thus, this system's flexibility allows it to be formed into curvilinear shapes.

Applicant respectfully urges that Pratt does not show Applicant's claimed novel *a conformable fuel delivery means coupled with said anode aspect of said membrane electrolyte that delivers fuel substantially uniformly to said anode aspect while said fuel cell maintains said desired shape, said fuel delivery means maintaining high compression along the active surfaces of the fuel cell.*

Applicant teaches a conformable fuel cell, which is fabricated in such a fashion to allow it generally conform to the contours of the desired application or to be sufficiently pliable to allow the assembly to be conformed to a variety of shapes or to change its shape based on the form of the object to which it is attached. Specifically, a membrane electrolyte is intimately interfaced with a catalyst layer along each of the mem-

brane's major surfaces. Thus, a catalyzed membrane electrolyte is created that has an anode aspect and a cathode aspect. In addition, the catalyzed membrane electrolyte is conformable to *any* desired shape of an object. Next, conformable current collectors are coupled with the anode aspect and the cathode aspect of said membrane electrolyte. The anode aspect of the membrane electrolyte is then coupled with *a conformable* (i.e., a gelled fuel source affixed to the conformed cell) *fuel delivery means that delivers fuel substantially uniformly to the anode aspect while at the same time maintaining the desired shape.* That is the conformability of the fuel delivery means is conformable while at the same time providing high compression along the active surface of the fuel cell. Finally in the claimed invention, an electrical coupling is disposed across the anode aspect and the cathode aspect that has the means to connect to an application device being powered by the fuel cell.

Pratt does not at any time disclose *a conformable fuel delivery means which is coupled with the anode aspect of current collector.* This is particularly important to applicant's claimed invention because, as disclosed on page 5 lines 12-13 of the specification, it allows the structure to provide high compression along the active surface of the fuel cell (i.e., the conformable fuel surface and the anode aspect of the fuel cell). Therefore, if the fuel delivery means is not conformable (which is not disclosed in Pratt) then fuel cell will lose compression, (this does not mean that Pratt is not functional just not as efficient) Pratt merely discloses metal circuitry which has the current collectors etched into the metal foil thereby creating a unibodied object (applicant' s invention is formed from distinctive separate elements which can be separable, etching indicates that the elements are formed into one piece which is not capable of being separating into separate components (i.e., the membrane electrolyte, the diffusion layers, the flexible current collector, the conformable fuel delivery means and the electrical coupling)). Furthermore, at no time does Pratt disclose using a conformable fuel delivery means that is coupled to the anode aspect of the current collector so that a high compression is maintained on the active surfaces of the fuel cell.

Accordingly, Applicant respectfully urges that the Pratt patent is legally precluded from anticipating the claimed invention under 35 U.S.C. § 102 because of the absence from the Pratt patent of Applicant's claimed novel use of *a conformable fuel delivery means coupled with said anode aspect of said membrane electrolyte that delivers fuel substantially uniformly to said anode aspect while said fuel cell maintains said desired shape, said fuel delivery means maintaining high compression along the active surfaces of the fuel cell.*

Rejections Under 35 U.S.C. § 103

At page 4 of the Office Action, claims 3, 6, 13, 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pratt, and in view of Rosen U.S. Patent No. 6,045,575, in view of Kelley U.S. Patent No. 6,268,077, in view of JP 02-234358 (hereinafter “JP ‘358”), in view of Wilkinson U.S. Patent Application No. 2001/0041281, in view of Zaima U.S. Patent No. 4,973,531, and in view of Dristy U.S. Patent Application No. 2002/0071984.

Claims 3, 6, 13, 14 are dependent claims that are dependent from independent claims which are believed to be allowable for the reasons described above. Accordingly, claims 3, 6, 13, 14 are believed to be in condition for allowance.

CONCLUSION

All independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims, and therefore in condition for allowance.

Favorable action is respectfully solicited.

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Respectfully submitted,

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